



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

Aircraft Ground Movement by Tow Tractors

Physical, Mathematical, Computer and Life Sciences / Physical Sciences

Unit Standard 261178 · NQF Level 4 · 14 Credits · 11 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills required to safely and effectively move aircraft on the ground using tow tractors. It covers the principles of aircraft ground movement, operational procedures, and safety protocols to prevent accidents and damage. Learners will understand the responsibilities of ground crew and the importance of communication during towing operations.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Physical Sciences
Unit Standard	261178
Accreditation	SAQA Accredited · NQF Level 4 · 14 Credits
Duration	11 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the correct procedures for attaching and detaching a tow tractor to an aircraft.
- Apply safety protocols and risk assessment techniques during aircraft ground movement.
- Analyze different types of tow tractors and their appropriate applications for various aircraft.
- Evaluate communication methods and signals used between the tow tractor driver and ground crew.
- Implement pre-movement checks and post-movement procedures for tow tractors and aircraft.
- Identify potential hazards and emergency procedures related to aircraft towing operations.

WHO SHOULD ATTEND

- This course is designed for ground handling staff, ramp agents, and aviation operations personnel who are involved in the movement of aircraft on the ground.
- It is also suitable for supervisors and managers overseeing ground operations at airports.

COURSE OUTLINE

Day 1: Introduction to Aircraft Ground Movement and Tow Tractors

- Overview of aircraft ground movement operations
- Types of tow tractors: pushback tugs, towbarless tugs, conventional tugs
- Key components of a tow tractor
- Safety regulations and industry standards (IATA, SA-CAA)
- Introduction to aircraft towing procedures

Day 2: Tow Tractor Systems and Pre-Operational Checks

- Tow tractor systems overview: power train, hydraulics, electrical
- Daily inspection checklist: fluids, tires, lights, brakes
- Start-up and shut-down procedures
- Interpretation of dashboard gauges and warning lights
- Basic troubleshooting of common issues

Day 3: Aircraft Towing Equipment and Attachments

- Towbar types and compatibility with aircraft
- Towbarless towing technology
- Load capacity calculations and limitations
- Inspection of towbars and adapters for wear and damage
- Proper storage and handling of equipment

Day 4: Communication and Coordination in Ground Operations

- Radio communication protocols and frequencies
- Standard hand signals for aircraft marshalling
- Roles and responsibilities of ground crew
- Communication during pushback and taxi
- Emergency communication procedures

Day 5: Aircraft Weight, Balance, and Towing Limits

- Aircraft weight and balance principles
- Determining towing limits based on aircraft type
- Turning radius and wingtip clearance calculations
- Safe towing speeds for different conditions
- Weather considerations: wind, rain, ice

Day 6: Pushback Procedures and Techniques

- Standard pushback procedures (with and without towbar)
- Communication with cockpit during pushback
- Navigating tight spaces and obstacles
- Use of wing walkers and spotters
- Emergency stop and abort procedures

Day 7: Towing Aircraft on Taxiways and Aprons

- Airport layout: taxiways, aprons, runways
- Taxiway markings, signs, and lighting
- Towing in low visibility (fog, night)
- Right-of-way and yielding procedures

- Towing multiple aircraft (towing trains)

Day 8: Safety and Emergency Procedures

- Hazard identification: jet blast, FOD, collisions
- Risk assessment matrix and controls
- Emergency response: brake failure, towbar detachment
- Fire extinguisher use and evacuation
- Incident reporting and documentation

Day 9: Regulations and Documentation

- SA-CAA regulations (Part 139, 140)
- Aircraft movement logs and records
- Maintenance documentation for tow tractors
- Liability and insurance in ground operations
- Quality assurance audits and inspections

Day 10: Advanced Towing Scenarios and Special Operations

- Towing on slopes and uneven surfaces
- Towing disabled aircraft (engine failure, flat tires)
- Operations in high winds and icy conditions
- Coordination with maintenance hangars
- Towing wide-body aircraft (special considerations)

Day 11: Assessment, Review, and Practical Integration

- Comprehensive review of key concepts
- Simulated pushback and towing exercise
- Written assessment on regulations and procedures
- Feedback session and course evaluation
- Certification requirements and next steps

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 **14 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 28,200.00	R 28,200.00
1	In-House	R 36,700.00	R 36,700.00
1	On-Campus (Pretoria)	R 42,300.00	R 42,300.00

UPCOMING SESSIONS

No sessions are currently scheduled. Please contact us to arrange a session at a time and location that suits your team.

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 261178) 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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