

RELEASE OF UPDATED TRAINING STANDARD LOG BOOK

Trade Name and Code	<ul style="list-style-type: none"> • Heavy Duty Equipment Technician (421A)
Implementation Date of New Standard	<ul style="list-style-type: none"> • July 16th, 2015, released as version 421A V 300
Implementation Plan	<ul style="list-style-type: none"> • Apprentices who began their apprenticeship with the June 1, 2002 version of the 421A training standard can complete their program using this standard. • All apprentices with initial training agreements registered on or after July 16th, 2015 must be trained to the new standard. • On or after July 16th, 2015, any apprentice who loses his or her training standard must be trained to and completed with the new standard even if they began their apprenticeship with the 2002 version.
Impact on Curriculum Standard	<ul style="list-style-type: none"> • None
Training Standard Access	<p><u>As of July 16th, 2015:</u></p> <ul style="list-style-type: none"> ○ The new Log Book will be available on the OCOT website. ○ OCOT will mail a printed Log Book to each apprentice who becomes a new member of their Apprentices Class in the Heavy Duty Equipment Technician trade when they mail the apprentice's Statement of Membership card. • If the apprentice wants a copy of the Log Book before receiving the printed copy in the mail, the apprentice can download/print a copy from the OCOT website.
Change: Skill Set Name	<ul style="list-style-type: none"> • Engine Management Systems skill set re-named as <u>Fuel Systems</u> (U8002.0) • Electrical Systems – Starting and Charging skill set shortened and re-named as <u>Electrical Systems</u> (U8004.0) • Clutches and Transmissions skill set re-named as <u>Hydrostatic and Transmission Systems</u> (U8006.0) • Air supply and Auxiliary Air Systems and Heating, Ventilation, and Air-Conditioning Systems skills sets merged and re-named as <u>Climate Control Systems</u> (U8011.0)

	<ul style="list-style-type: none"> • Body and Trim skill set re-named as <u>Structural Components and Accessories</u> (U8012.0) • Earth Moving Equipment skill set re-named as <u>Ground Engaging Equipment and Attachments</u> (U8014.0) <p>Rationale:</p> <ul style="list-style-type: none"> • These skill sets were re-named to reflect current technological terminology more accurately and to align better with the National Occupational Analysis (NOA).
<p>Change: Optional Skills Become Mandatory</p>	<p>All four skills in the newly re-named skill set U8012.0 – Structural Components and Accessories are now <i>mandatory</i> (see Note section for impact)</p> <ul style="list-style-type: none"> • Rationale: These skills are an important part of the duties of a Heavy Duty Equipment Technician and are performed in multiple environments, from large rental companies and distributors to small shops. Mechanical repairs on structural components, accessories and attachments are now in line with the updates made to the NOA and in sync with interprovincial documents in this trade area.
<p>Change: Mandatory Skills Become Optional</p>	<p>Six skills under the newly re-named Hydrostatic and Transmission Systems (U8006.0) skill set are now <i>optional</i> (see Note section for impact):</p> <p>8006.02 – Diagnose and troubleshoot clutch systems and components</p> <p>8006.03 – Repair clutch systems and components</p> <p>8006.04 – Verify repair of clutch systems and components</p> <p>8006.05 – Diagnose and troubleshoot manual transmission/transfer cases and components</p> <p>8006.06 – Repair manual transmission/transfer cases and components</p> <p>8006.07 – Verify repair of manual transmissions/transfer cases and components</p> <ul style="list-style-type: none"> • Rationale: Skills on manual transmissions and clutch systems are becoming less relevant as technology changes; these competencies are applicable to older machines, which most apprentices and technicians would rarely see on the job. Most machines have power shift and hydrostatic transmission systems. The transition to optional skills takes into account that these older machines will soon be obsolete. <p>Three skills under Steering Systems (U8008.0) skill set are now <i>optional</i> (see Note sections for impact):</p> <p>8008.05 – Diagnose and troubleshoot steering clutches/brakes and</p>

	<p>components</p> <p>8008.06 – Repair steering clutches/brakes and components</p> <p>8008.07 – Verify the repair of steering clutches/brakes and components</p> <ul style="list-style-type: none"> • Rationale: Competencies related to steering clutches/brakes and components are only relevant to older machines, which most apprentices and technicians would rarely see on the job. The transition to optional skills takes into account that these older machines will soon be obsolete. <p>Three skills under Braking Systems (U8009.0) skill set are now optional (see Note section for impact):</p> <p>8009.05 – Diagnose and troubleshoot air braking systems and components</p> <p>8009.06 – Repair air braking systems and components</p> <p>8009.07 – Verify repair of air braking systems and components</p> <ul style="list-style-type: none"> • Rationale: Skills on air braking systems for heavy duty equipment are becoming less relevant as technology changes; these competencies are applicable to older machines, which most apprentices and technicians would rarely see on the job. Most machines utilize hydraulic or mechanical braking systems. The transition to optional skills takes into account that these older machines will soon be obsolete.
<p>Skills Added</p>	<p>Two mandatory skills added to the Intake, Exhaust and Emission Control Systems skill set (U8003.0):</p> <p>8003.05 – Perform a visual inspection, identifying turbocharger/blower systems and components</p> <p>8003.09 – Perform a visual inspection, identifying emission control systems and components</p> <ul style="list-style-type: none"> • Rationale: In the previous standard, all three identifying system types were grouped under the skill: “Perform visual inspection, identifying systems type and applications”. To ensure apprentices are trained and competent to perform a visual inspection on all three systems (intake and exhaust; turbocharger/blower; emission control), a “perform a visual inspection” skill was added for each type. <p>Three optional skills added to the newly re-named skill set Electrical Systems (U8004.0):</p> <p>8004.13 – Diagnose and troubleshoot hybrid drives and components</p> <p>8004.14 – Repair hybrid drives and components</p> <p>8004.15 – Verify hybrid drives and components</p>

	<ul style="list-style-type: none"> • Rationale: The shift in consumer preference and environmental awareness means there is a greater chance of servicing hybrid equipment drives. Manufacturers are adding more hybrid technology to their product lines every year. A technician should have training in this area to be able to respond to this advance in technology, but the opportunities to work on hybrid heavy duty equipment are limited, so training in these skills is optional at present.
Skills Moved	<p>Three <i>mandatory</i> skills related to fuel delivery systems and components moved from the Engine Systems (U8001.0) skill set to the newly re-named Fuel Systems (U8002.0) skill set:</p> <p>8002.02 – Diagnose and troubleshoot fuel subsystems and components</p> <p>8002.03 – Repair fuel subsystems and components</p> <p>8002.04 – Verify repair of fuel subsystems and components</p> <p>Rationale:</p> <ul style="list-style-type: none"> • The Engine Systems, Engine Management Systems and the Fuel Systems skill sets were reorganized in the new standard. The new delineation between the skill sets required a reorganization of the sub-skills within those skill sets. This included the integration of the original Engine Management Systems with the new Fuel Systems skill set. • The focus of the enhanced Fuel Systems skill set includes a specific delineation between fuel sub-systems, mechanically controlled systems and electronically controlled systems. As a result, the aforementioned skills were moved to U8002.0. • The new structure also better parallels the structure of training standards in the related trades of Agricultural Equipment Technician and Powerlift Truck Technician. <p>Three <i>mandatory</i> skills related to pneumatic pressure-actuated hydraulic systems were integrated into related skills under the Hydraulic Systems skill set (U8005.0).</p> <p>Rationale:</p> <ul style="list-style-type: none"> • The retitling of these skills under the competencies related to “mechanical/pilot controlled hydraulic systems” is more inclusive and up to date with trade terminology. • The direct reference to pneumatics in the original skills is primarily to hydraulic systems and these competencies are now found under skills 8005.02, 8005.03 and 8005.04.
Skills Removed	<ul style="list-style-type: none"> • None

NOTE

- The NOA for the Heavy Duty Equipment Technician was recently reviewed; the new version of the NOA is set for release in the fall of 2015. The changes made to this Log Book are aligned with the NOA changes.
- The prior provincial standard version (2002) was three versions behind the interprovincial NOA.
- The changes from mandatory to optional status of a skill, and vice versa, affect only what the sponsor must provide training for as part of an apprentice's workplace training. They do not affect the scope of practice of the compulsory trade (i.e., the fact that "Diagnose and troubleshoot clutch systems and components" is now an optional skill in the training standard does not mean that registration as an apprentice or certification as a journeyman to perform this skill on the job is optional.)
 - While the Log Book draws on the scope of practice for 421A (section 12 of Ontario Regulation 277/11 under OCTAA), it does not add to or modify the scope of practice prescribed in regulation.
 - The scope of the trade regulates the classification of this trade as compulsory, not the Log Book.