ONTARIO COLLEGE OF TRADES

ORDRE DES MÉTIERS DE L'ONTARIO

Apprenticeship Training Standard

Schedule of Training

Bearings Mechanic

Trade Code: 615A

Development Date: 2000

Please Note: Apprenticeship Training and Curriculum Standards were developed by the Ministry of Training, Colleges and Universities (MTCU). As of April 8th, 2013, the Ontario College of Trades (College) has become responsible for the development and maintenance of these standards. The College is carrying over existing standards without any changes.

However, because the Apprenticeship Training and Curriculum Standards documents were developed under either the *Trades Qualification and Apprenticeship Act* (TQAA) or the *Apprenticeship and Certification Act, 1998* (ACA), the definitions contained in these documents may no longer be accurate and may not be reflective of the *Ontario College of Trades and Apprenticeship Act, 2009* (OCTAA) as the new trades legislation in the province. The College will update these definitions in the future.

Meanwhile, please refer to the College's website (http://www.collegeoftrades.ca) for the most accurate and up-to-date information about the College. For information on OCTAA and its regulations, please visit: http://www.collegeoftrades.ca/about/legislation-and-regulations

NOTICE OF COLLECTION OF PERSONAL INFORMATION

1. At any time during your apprenticeship training, you may be required to show this training standard to the Ministry of Training, Colleges and Universities (the Ministry). You will be required to disclose the signed Apprenticeship Completion form to the Ministry in order to complete your program. The Ministry will use your personal information to administer and finance Ontario's apprenticeship training system, including confirming your completion and issuing your certificate of apprenticeship.

2. The Ministry will disclose information about your program completion and your certificate of apprenticeship to the Ontario College of Trades, as it is necessary for the College to carry out its responsibilities.

3. Your personal information is collected, used and disclosed by the Ministry under the authority of the Ontario College of Trades and Apprenticeship Act, 2009.

4. Questions about the collection, use and disclosure of your personal information by the Ministry may be addressed to the:

   Manager, Employment Ontario Contact Centre
   Ministry of Training, Colleges and Universities
   33 Bloor St. E, 2nd floor, Toronto, Ontario M7A 2S3
   Toll-free: 1-800-387-5656; Toronto: 416-326-5656
   TTY: 1-866-533-6339 or 416-325-4084.

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

A. DESCRIPTION/DUTIES

A **Bearings Mechanic** performs the following:

- Disassembles and cleans bearings, seals and chocks
- Inspects bearings, seals and chocks for wear, and damage
- Repairs or replaces bearings, seals and chocks

Is knowledge in:

OHSA
Metallurgy
NDT
Process Knowledge

Benchmark/Guideline Total Training Time Frames (Min/Max) (On-The-Job and In-School) 4,000 hr - 6,000 hrs	**Company/Sector/IC Name:**
Originating TC/IC/PDSU _____ **Date** _____	**District Manager/PDSU Manager** _____ **Date** _____

HEAD OFFICE USE

Program Standards Approval **By** _____ **Date** _____	**Director's Approval** **By** _____ **Date** _____	**Assigned Trade Code** **615A**

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

B. ON-THE JOB TRAINING

Unit No	PERFORMANCE OBJECTIVES (ON-THE-JOB SKILL SETS)
615A-1	**Demonstrates Safe Working Practices and Techniques** **Protect self and others**; comply with safety legislation under the Occupational Health and Safety Act, Workplace Hazardous Materials Information System (WHMIS); wear and maintain safety clothing and equipment; report all hazards; apply basic first aid; apply confined space safety procedures; apply machinery and equipment lock out procedures; using correct body mechanics when lifting loads; communicate with fellow workers; report all accidents and respond to emergency situations; in accordance with OHSA and company procedures. Follow environmental procedures and regulations. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-2	**Communicate Orally and Write Reports** **Prepare and give oral and written instructions** to fellow workers, clients, supervisors, and contractors; read technical literature and manufacturer's specifications; write maintenance and job reports; prepare reports using computer and job maintenance software for specific applications; complete inventory requisitions for replacement parts and supplies; in accordance with company policies and procedures. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-3	**Read Drawings and Schematics** **Read and interpret** engineering drawings, schematics, manufacturer's manuals, and job specifications to determine: drawing symbols; rough drawing sketches requirements; schematics; logic diagrams; and to ensure compliance with company standards and specifications for the installation and maintenance of bearings and chocks. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

B. ON-THE JOB TRAINING

Unit No	PERFORMANCE OBJECTIVES (ON-THE-JOB SKILL SETS)
615A-4	**Maintain and use hand and power tools** **Maintain and use hand and power tools** including sockets, spanners, wrenches, screwdrivers, hammers, chisels, punches, pliers, scrapers, drills, taps, reamers, dies, squares, tapes, snips, saws, tube and pipe benders, chippers, power jacks, portable seating and lapping equipment, threading machines, shears, magnetic drills, hand millers, power saws and impact tools, to assemble, install, and retrofit bearings and chocks, in accordance with manufacturer specifications, company procedures, and OHSA. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-5	**Set up and use Machine Tools** **Set up and operate machines tools** including lathe, pedestal and radial drill, surface grinder, cut-off and band saw, hydraulic press by: setting speed and feed controls; selecting cutting tools and accessories; preparing cutting tools; setting up and securing workpiece; machining and cutting metal; in accordance with manufacturer specifications, OHSA, and company procedures. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-6	**Maintain and use Precision Measuring Equipment** **Maintains, uses, and calibrates** precision measuring and alignment equipment and instruments to ensure that correct measuring, moving, setting up, and maintenance of bearings and chocks is in accordance with manufacturer and job specifications. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

B. ON-THE JOB TRAINING

Unit No	PERFORMANCE OBJECTIVES (ON-THE-JOB SKILL SETS)
615A-7	**Select and use Materials and Fasteners** Identify and use ferrous and non-ferrous metals, alloys and non-metallic materials; perform heat treating and stress relieving of material; identify and perform correct thread sizing; identify and use nuts, bolts, screws, dowels, and chemical fasteners; in accordance with charts, manuals, drawings, job specifications, government regulations, and company procedures. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-8	**Select and apply lubricants** Identify, select and apply lubricants, oils, and greases, ensuring that lubricant is correct one for application to perform optimum cooling and cutting and to prevent damage to machine or workpiece; maintain manual and automatic lubrication systems; handle and store lubricants; maintain record system; and, monitor, diagnoses, and repairs lubrication systems, in accordance with manufacturer's specifications, OHSA, and company procedures. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____
615A-9	**Rigging and Hoisting** Plan lifts; perform calculations using load charts; select and use correct rigging/hoisting equipment; inspect and maintain rigging/hoisting equipment; use hand and radio signals; control load balance and direct; and disassemble all equipment safely; in accordance with company procedures, and OHSA. **Date** **Apprentice's Signature** **Sponsor's Signature** _____ _____ _____

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

B. ON-THE JOB TRAINING (Continued)

Unit No	PERFORMANCE OBJECTIVES (ON-THE-JOB SKILL SETS)
615A-10	**Weld, Braze and Solder** Set up and operate gas welding equipment to braze and solder; read and interpret welding symbols; select and use welding rods; layout, fabricate, and tack to specifications; work to be visually inspected and to specifications. **Date** _____ **Apprentice's Signature** _____ **Sponsor's Signature** _____
615A-11	**Install and Maintain Bearings, Seals, and Packing** Identify and apply bearing materials, fits and tolerances; fit and maintain plain, journal, sleeve, radial and axial bearings; install and maintain bearing housings; fit and maintain anti-friction axial, radial, ball, roller, needle, taper and spherical bearings; inspect and lubricate bearings; fit and maintain gasket, labyrinth, and mechanical seals; fit and maintain "O" ring and lip seals; apply chemical sealants; select, install and remove packing; ensure that maintenance and installation procedures are to manufacturers' specifications, and company standards. **Date** _____ **Apprentice's Signature** _____ **Sponsor's Signature** _____
615A-12	**Maintains Bearings, Seals, Chocks, Load Cells** Disassembles and cleans bearings, seals, and chocks; inspects bearings, seals, and chocks for wear and damage; repairs or replaces bearings, seals, and chocks, troubleshoots, and diagnoses mills for bearing problems and repairs as required; checks and aligns bearings, chocks, mill housing; maintains and troubleshoots speciality bearings; inspects, tests, and repairs hydraulic roll balance pistons; and services load cells; in accordance with manufacturer's specifications and company standards. **Date** _____ **Apprentice's Signature** _____ **Sponsor's Signature** _____

Ontario

SCHEDULE OF TRAINING
APPRENTICESHIP TRADE

BEARINGS MECHANIC - 615A

C. Off-the-Job Learning Outcomes:

CONTENT: (To be written in learning outcomes and benchmark timeframes). On successful completion of off-the-job (in-school) training, the apprentice will demonstrate the ability to:

Safety and Communications
Trade Calculations
Drawings/Layout
Metallurgy
Metrology/Charts
Benchwork
Saws
Drills
Lathes
Grinders
Alignment
Tribology
NDT
Process Knowledge
Rigging/Hoist

Source & Type (Specify in detail: block or day release; night school; in-plant; correspondence).

Flexible delivery

Benchmark/Guideline Time-frames of Off-The-Job/In-School Learning Outcomes

240 Hours

Funding

Performance Objectives and Learning Outcomes reached

Date: _____

Sponsor/Trainer/Employer signature: _____

Apprentice signature: _____

You will be required to disclose this signed form to the Ministry of Training, Colleges and Universities in order to complete your program. The Ministry will use your personal information to administer and finance Ontario's apprenticeship training system. For further information please see the notice/declaration for collection of personal information that is referenced in the table of contents of this training standard.