

IAM/Boeing :: Joint Programs Apprenticeship Program - Puget Sound



PREP PACK

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- Job Description



Latest Revision: June 2022



IAM/Boeing :: Joint Programs Apprenticeship Program - Puget Sound



Preparing for an Apprenticeship



Thank you for your interest in the IAM/Boeing Joint Apprenticeship Program. This prep packet contains the information needed to qualify and apply for a Boeing Company apprenticeship in the Puget Sound area.

Applicants must meet specific minimum qualifications in order to apply. These minimum qualifications may be met in one of two ways: either through Vocational Training or Work Experience.

Candidates may apply for apprenticeships when jobs are posted throughout the year on the Boeing Careers website at http://www.boeing.com/careers. A Boeing Careers tip sheet and other documents to assist candidates with the application process are available at http://www.iam-boeing-apprenticeship.com.

Application acceptance dates are advertised in advance in several local Boeing news sources, the IAM District 751 Aero Mechanic newspaper, the IAM District 751 website (http://www.iam751.org), the IAM/Boeing Joint Apprenticeship internal website (http://apprenticeship.web.boeing.com) and external website (http://www.iam-boeing-apprenticeship.com). Applications are accepted throughout the year. However, not all of our trades are available during each hiring event. Positions are advertised as they become available.

To be eligible to apply for a Puget Sound area IAM/Boeing Joint Apprenticeship, you must:

- be at least 18 years of age,
- be eligible for hire or rehire at The Boeing Company in the Puget Sound area,
- be a high school graduate (or equivalent). If proof of graduation cannot be provided, a two or four year degree is acceptable.
- have US Person status as defined by The Boeing Company (see FAQs),
- meet specific defined vocational training or trade-related work experience requirements,
- be able to perform the physical requirements of the targeted apprenticeship (Please note: Industrial Electronic Maintenance Technician applicants must be able to distinguish between primary colors.), and
- never have been enrolled in, or completed, an IAM/Boeing Joint Apprenticeship.

The Apprenticeship Program is administered by the IAM/Boeing Joint Apprenticeship Committee which is comprised of equal numbers of IAM District 751 and Boeing Company representatives. Programs are 8,000 or 10,000 hours in length and include paid on-the-job training and unpaid classroom education. The first 20% of the on-the-job training is a probationary period. Apprentices attend school for a minimum of 144 unpaid hours per school year (four hours per week) at the South Seattle College Georgetown Apprenticeship and Education Center.

Boeing is an Equal Opportunity Employer. Employment decisions are made without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, veteran status or other characteristics protected by law. Women and minorities are encouraged to apply.

Don't wait until the next application period is advertised before working to become qualified – start today!

—Apprenticeship Wage Rates —

Apprentice wages are defined in Article 17 of the Collective Bargaining Agreement between the IAM 751 Union and The Boeing Company. Wages are updated each September. Apprentices begin at labor grade zero and advance one labor grade for every 1000 apprenticeship hours until completion at labor grade 8, 9, or 10, depending upon the trade. Apprentices are placed in the target job at the maximum rate upon graduation and receive a Journey-worker Certificate and Card which is recognized worldwide.

The chart below shows the base rate of pay for apprentices, effective **September 10**, **2021**. Target job codes end in a 08, 09, or 10 and are located on the following trade specific pages. All apprenticeships are full time jobs provided by The Boeing Company and represented by the IAM District 751 Union.

Apprenticeship Program Hours	Apprenticeship Job Code	Grade 8 Target Job	Grade 9 Target Job	Grade 10 Target Job
0 to 999	AxxA0	\$33.02	\$33.92	\$34.68
1,000 to 1,999	AxxA1	\$34.53	\$35.46	\$35.97
2,000 to 2,999	AxxA2	\$36.04	\$37.00	\$37.23
3,000 to 3,999	AxxA3	\$37.52	\$38.54	\$38.51
4,000 to 4,999	AxxA4	\$39.02	\$40.09	\$39.79
5,000 to 5,999	AxxA5	\$40.52	\$41.63	\$41.06
6,000 to 6,999	AxxA6	\$42.03	\$43.17	\$42.32
7,000 to 7,999	AxxA7	\$43.52	\$44.73	\$43.60
8,000 to 8,999	AxxA8	N/A	N/A	\$44.88
9,000 to 9,999	AxxA9	N/A	N/A	\$46.15

— Minimum Requirements —

There are two ways to qualify for the Apprenticeship Program: Vocational Training or Work Experience.

Vocational Training: To qualify through vocational training, all courses listed for the trade must be complete before applying. Courses with equivalent content are acceptable. Additional consideration is given for trade-specific and trade-related work experience. A score of at least 80% is required for all Boeing classes or challenge tests; a grade of "C" or better for all educational transcripts; a pass is required for pass/fail courses.

Work Experience: To qualify through work experience, the minimum requirement is one year of trade-related work experience. For the Industrial Electronic Maintenance Technician program, two years of work experience are required. The experience can be in just one category or a total of any combination of the noted categories listed for each trade. Additional consideration is given for trade-specific and trade-related vocational training.

Assessment Placement Results Required

All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completions as follows: Math Intermediate Algebra, English 90. An Assessment must be completed prior to the time of application.

Documentation for all course completions, test challenges, and assessment placement results must be provided upon request. Any course of equivalent content is an acceptable substitute to the noted courses. All vocational training must be completed prior to applying. On the following pages are the requirements for each trade. Locate your desired trade and determine your qualifying method: Vocational Training or Work Experience. Note the requirements carefully; each requirement must be met or your application or it will not be accepted.

Blue Streak Mechanic

Α

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Job: 14308 Blue Streak Mechanic

Potential Locations: Everett, Renton and Auburn

Blue Streak Mechanics fabricate details and assemblies by hand and other mechanical means to support production, Aircraft on Ground (AOG), and/or critical spares requirements. When prints, templates, or tools are not available they develop and fabricate complex temporary shop aid templates and tools, which include forming compound curvatures and angles to support part fabrication. Accomplishment of the above tasks requires regular use of obsolete blueprints, advanced shop mathematics, trigonometry, descriptive geometry (layout and lofting), geometric dimensioning and tolerancing, and computer aided design applications such as CATIA.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.
☐ Basic Blueprint Reading or Machine Blueprint Reading
☐ Basic Precision Measuring Tools
□ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalen content is an acceptable substitute to the noted courses.
□ I plan to qualify through Vocational Training. An alternate method to meet the Blue Streak Mechanic minimum vocational training requirements is to complete a certificate program that contains equivalent content to the acceptable Composite certificate programs noted below and assessment placement or course results noted above.
Composite Technician Certificate (15 Credits); Edmonds Community College, Edmonds, WA: See https://www.edmonds.edu/
Manufacturing Composites Certificate (28 Credits); Washington Aerospace Research & Training (WATR) Center, Everett, WA: See https://watrcenter.edmonds.edu/
 Aerospace Composite Technician Certificate (40 Credits); Everett Community College, Everett, WA: See https://www.everettcc.edu
Advanced Composites Manufacturing Technician Certificate (31 Credits), Skagit Valley College, Mount Vernon, WA: See https://www.skagit.edu/

☐ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum

requirement may be composed of a combination of trade related work experiences. A resume listing your work

Work Experience Examples:

- Bench Mechanic
- Boring Mills (Vertical, Horizontal)

experience must be available upon request.

- Computer Numerical Control
- Drills (Radial, Press, NC)
- Duct Prep and Fit (for Weld)
- Fastener Removal (Rivets, Hylocs, Screws, etc.)
- Flight Control/Control Surface Repair (Flaps, Rudders, Slats)
- Forming (Roll, Hydro, Stretch, or Brake)
- Grinding (Internal, External, Surface, Thread)
- **Heat Treat**

- Jig Bore, Jig Grinder
- Lathes (Conventional, NC, CNC, Turret)
- Layout (Conventional, CMM)
- Layout & Lofting (Sheet Metal, Non-Metallic, Composite)
- Mills (Conventional, NC, CNC, Profile)
- Relocating, re-drilling, and reaming holes to size
- Sheet Metal Assembly, Sheet Metal Details
- Tool Grind
- Tooling, Tool Making
- Trade Related Bench Work

Composite Manufacturing Technician

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Job: 74808 Composite Manufacturing Technician

Potential Locations: Tukwila and Frederickson

Composite Manufacturing Technicians will learn a wide range of composite processes and work on composite equipment at Frederickson and the Developmental Center. The on-the-job training skills include general, pre-cure, cure, trim, and assembly. Computer skills include Windows Navigation, Microsoft Desktop Applications, Computing Systems, Specific Application Navigation, Drawings/Blueprints, REDARS navigation, On Line Work Instructions, Sketches, CATIA V5, MSDS Navigation, Specification Boeing Production System, and MAPS.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.

□ E	Basic Blueprint Reading or Machine Blueprint Reading	
□ E	Basic Precision Measuring Tools	
	Introduction to Composites	
	CNC Machining (a course minimum of 80 hours, or 5 or more credits) See page 16 for examples of approved CNC, milling machine, and lathe courses.	
9	All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.	
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all not Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all cours completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalence content is an acceptable substitute to the noted courses.		
minimum	o qualify through Vocational Training. An alternate method to meet the Composite Manufacturing Technician m vocational training requirements is to complete a certificate program that contains equivalent content to the ble Composite certificate programs noted below and assessment placement or course results noted above.	
	Composite Technician Certificate (15 Credits); Edmonds Community College, Edmonds, WA: See https://www.edmonds.edu/	
	Manufacturing Composites Certificate (28 Credits); Washington Aerospace Research & Training (WATR) Center, Everett, WA: See https://watrcenter.edmonds.edu/	
	Aerospace Composite Technician Certificate (40 Credits); Everett Community College, Everett, WA: See https://www.everettcc.edu	
	Advanced Composites Manufacturing Technician Certificate (31 Credits), Skagit Valley College, Mount Vernon, WA: See https://www.skagit.edu/	
course i	o qualify through Work Experience. One year of trade related work experience and assessment placement or results noted above. Examples of some trade related work experience are listed below. The one-year minimum ment may be composed of a combination of trade related work experiences. A resume listing your work experience available upon request.	

Work Experience Examples:

- · Assembly/Bench Work
- Automated Water Jet
- Bagging/Thermal Couples
- · Bulk Resin Infusion; Noodle Fabrication
- Compaction; Fiber Placement
- De-Bag; Autoclave/Oven
- · Drape Forming, Heat Blankets

- Hand or Automated Lay-up
- · Hand Finish; De-Burr Machine
- · Layout; Forming or Straightening
- Mills (Conventional, NC, CNC, Profile)
- Saw/Drills: Shaper
- Tool Prep/Clean/Mold Release
- Tracker Leveling/Laser Radar

Industrial Electronic Maintenance Technician

Term: 10,000 hours, 5 years (9,200 on-the-job hours and 800 school hours)

Target Jobs:

- 87110 Electronic Technician Infrastructure Maintenance
- 87210 Electronic Technician Precision Machine Tool Maintenance

Potential Locations: Everett, Renton, Seattle, Tukwila, Auburn and Frederickson

Electronic Maintenance Technicians install, diagnose, repair, maintain, rework, modify, test, and calibrate electronic and/or electrical systems related to plant facilities, process support equipment, and production machinery. The Electronic Maintenance Technician apprentice training includes analog and digital circuits, electrical and electronic test equipment, computer systems, process control systems, robotics, computer numerically controlled equipment, motor controllers, AC circuits, electrical safety, and techniques for troubleshooting and analyzing complex electronic circuits.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.
 Basic Electronic/Electrical precision measuring tools. Examples include: digital multimeters, current clamp meters, oscilloscopes, meggers and surge testers, LCR meters, frequency meters, etc. Basic Electricity or Basic Electronics
All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non-Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.
□ I plan to qualify through Vocational Training. An alternate method to meet the Industrial Electronic Maintenance Technician minimum vocational training requirements is to complete a degree or certificate program that contains equivalent content to the examples noted below <u>and</u> assessment placement or course results as noted above.
☐ Electronic Equipment Service Technician AAS Degree (91 Credits); Industrial Electronics and Robotics Technician AAS Degree (119 Credits). Bates Technical College, Tacoma, WA See: https://www.batestech.edu/
■ Mechatronic AAS-T or AAT Degree (6 – 7 Qtr.); Mechatronics Co-Op Certificate A – Power (33 Credits); Mechatronics Co-Op Certificate B – Control (30 Credits). Clover Park Technical College, Lakewood, WA See: https://www.cptc.edu/
Advanced Manufacturing Technology – Mechatronics ATA Degree (90 Credits); Mechatronics Systems Certificate (19 Credits). Everett Community College, Everett, WA: See https://www.everettcc.edu/
Mechatronics Technician AAS Degree (105-114 Credits.); Mechatronics Certificate 1 (13 Credits); Mechatronics Certificate 2 (13 Credits). Green River College, Auburn, WA See: https://www.greenriver.edu/
Industrial Engineering AAS Degree (129 Credits) or Certificate (114 Credits); Mechatronics AAS Degree (91 Credits.); Mechatronics Certificate (44 Credits). Renton Technical College, Renton, WA See: https://www.rtc.edu/
Mechatronics AAS Degree (93 Credits); Mechatronics: Certificate of Proficiency (45 Credits); Machine Maintenance Certificate (16 Credits). Shoreline Community College, Shoreline, WA See: https://www.shoreline.edu/
□ I plan to qualify through Work Experience. Two years of trade related work experience and assessment placement or course results as noted above. Examples of trade related work experience are listed below. The two-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- Aircraft Simulator Technician
- A & P Mechanic
- Broadcast Technician
- Communications Technician
- Computer Controlled Machine
- Controls Technician
- · Electrical or Electronics Technician
- Electrician
- Fire Control Technician

- HVAC Technician
- Industrial Maintenance Electrician or Technician
- Instrumentation Technician
- · Machine Rebuild Technician
- Machine Tool Maintenance Mechanic
- Military Electrician or Technician
- Postal Equipment Technician
- · Robotics Technician
- Semiconductor Plant Maintenance Technician

Machine Tool Maintenance Mechanic

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Job: 89509 Machine Repair Mechanic A

Potential Locations: Everett, Renton, Seattle, Tukwila, Auburn, Frederickson

Machine Tool Maintenance Mechanics perform repairs, alignments, modifications, preventative maintenance and predictive maintenance on various types of production machinery and process support equipment. The Machine Tool Maintenance Mechanic apprentice training includes basic machine operations, machine lubrication, machine alignment, hydraulic and pneumatic systems, precision measuring equipment, hand and power tools, automated test equipment, and safety training in all aspects of machine maintenance.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.
☐ Basic Blueprint Reading
☐ Basic Precision Measuring Tools
□ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completed as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all no Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all cour completions and test challenges must be provided upon request and completed prior to applying. Any course of equivale content is an acceptable substitute to the noted courses.
□ I plan to qualify through Vocational Training. An alternate method to meet the Machine Tool Maintenance Mechanic minimum vocational training requirements is to complete a degree or certificate program that contains equivalent content to the examples noted below <u>and</u> assessment placement or course results as noted above.
Electronic Equipment Service Technician AAS Degree (91 Credits); Industrial Electronics and Robotics Technician AAS Degree (119 Credits). Bates Technical College, Tacoma, WA: See https://www.batestech.edu/
Industrial Maintenance and Mechatronics AAS Degree (117 Credits); Industrial Maintenance and Mechatronics Certificate (44 Credits). Bellingham Technical College, Bellingham, WA: See https://www.btc.edu/
■ Mechatronic AAS-T Degree or AAT Degree (7 Qtr.); Mechatronics Co-Op Certificate A – Power (33 Credits); Mechatronics Co-Op Certificate B – Control (30 Credits). Clover Park Technical College, Lakewood, WA: See https://www.cptc.edu/
Advanced Manufacturing Technology – Mechatronics ATA Degree (90 Credits); Mechatronics Systems Certificate (19 Credits). Everett Community College, Everett, WA: See https://www.everettcc.edu/
Mechatronics Technician AAS Degree (105-114 Credits.); Mechatronics Certificate 1 (13 Credits); Mechatronics Certificate 2 (13 Credits). Green River College, Auburn, WA: See https://www.greenriver.edu/
□ Industrial Engineering AAS Degree (129 Credits); Industrial Engineering Certificate (114 Credits); Mechatronics AAS Degree (91 Credits.); Mechatronics Certificate (44 Credits). Renton Technical College, Renton, WA: See https://www.rtc.edu/
☐ Mechatronics AAS Degree (93 Credits); Mechatronics: Certificate of Proficiency (45 Credits); Machine Maintenance Certificate (16 Credits). Shoreline Community College, Shoreline, WA: See https://www.shoreline.edu/
□ I plan to qualify through Work Experience. One year of trade related work experience <u>and</u> assessment placement of course results noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- A & P Mechanic
- Airframe Mechanic
- Any Factory Maintenance Repair Work
- Automotive Mechanic
- Fabrication Mechanic
- Lathes (Conventional, NC, CNC, Turret)

- Machine Rebuild
- Maintenance Mechanic
- Maintenance Oiler
- Mills (Conventional, NC, CNC, Profile)
- Millwright
- Portable Tool Repair

Maintenance Machinist

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Job: 89709 Maintenance Machinist A

Potential Locations: Auburn

Maintenance Machinists perform all necessary bench and machine operations to make new machines or new and replacement parts for the rebuilding of precision-built fabrication machines and machine tools. They breakdown and sequence work assignments to insure proper machining and assembly operations; devise, improvise and fabricate facilities equipment to accomplish work; and perform work in other maintenance classifications when incidental but necessary to accomplish tasks.

I plan to qualify through Vocational Training. All courses must be completed before applying.
☐ Basic Blueprint Reading or Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Milling Machine (a course minimum of 80 hours, or 5 or more credits)
☐ Lathe (a course minimum of 80 hours, or 5 or more credits)
See page 16 for examples of approved conventional milling machine and lathe courses.
□ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non-Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.
□ I plan to qualify through Vocational Training. An alternate method to meet the Maintenance Machinist minimum vocational training requirements is to complete an 80 hour Lathe course as noted above <u>and</u> a certificate program that contains equivalent content to the examples noted below <u>and</u> assessment placement or course results as noted above.
☐ Lathe Course as noted above <u>and</u> a certificate program containing equivalent content to the examples noted below.
Industrial Maintenance and Mechatronics Certificate (44 Credits). Bellingham Technical College, Bellingham, WA: See https://www.btc.edu/
☐ Mechatronics Co-Op Certificate A – Power (33 Credits); Mechatronics Co-Op Certificate B – Control (30 Credits). Clover Park Technical College, Lakewood, WA: See https://www.cptc.edu/
☐ Advanced Manufacturing Technology – Mechatronics ATA Degree (90 Credits); Mechatronics Systems Certificate (19 Credits). Everett Community College, Everett, WA: See https://www.everettcc.edu/
Mechatronics Certificate 1 (13 Credits); Mechatronics Certificate 2 (13 Credits). Green River College, Auburn, WA: See https://www.greenriver.edu/
Mechatronics AAS Degree (91 Credits.); Mechatronics Certificate (44 Credits). Renton Technical College, Renton, WA: See https://www.rtc.edu/
Mechatronics: Certificate of Proficiency (45 Credits); Machine Maintenance Certificate (16 Credits). Shoreline Community College, Shoreline, WA: See https://www.shoreline.edu/
☐ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or
course results noted above. Examples of some trade related work experience are listed below. The one-year minimum

Work Experience Examples:

- Boring Mills (Vertical, Horizontal)
- Certified A & P Mechanic
- Drills (Radial, Press, NC)
- Grinding (Internal, External, Surface, Thread)
- · Jig Bore, Jig Grinder

must be available upon request.

Lathes (Conventional, NC, CNC, Turret)

Work Experience Examples:

- Layout (Conventional, CMM)
- · Machine Rebuild
- Machine Tool Maintenance Mechanic
- Mills (Conventional, NC, CNC, Profile)
- Portable Tool Repair

requirement may be composed of a combination of trade related work experiences. A resume listing your work experience

Manufacturing Machinist

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs:

- 73809 FMS Operator
- N0309 General Machinist
- C3809 Machinist Assembler Precision

Potential Locations: Everett, Seattle and Auburn

Manufacturing Machinists set up and operate various conventional and numerical control machine tools to fabricate close tolerance, high quality parts from metals, plastics, and composite materials, often in a cellular manufacturing environment. In addition to machine training, the Manufacturing Machinist apprenticeship includes use of precision measuring tools, trade related bench work, inspection, numerical machine programming, heat treat, layout operations, tool grinding, and machine related processes.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.
☐ Basic Blueprint Reading or Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Milling Machine (a course minimum of 80 hours, or 5 or more credits)
☐ Lathe (a course minimum of 80 hours, or 5 or more credits) See page 16 for examples of approved conventional milling machine and lathe courses.
□ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalen

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum

requirement may be composed of a combination of trade related work experiences. A resume listing your work experience

must be available upon request.

Work Experience Examples:

Boring Mills (Vertical, Horizontal)

content is an acceptable substitute to the noted courses.

- Computer Numerical Control
- Drills (Radial, Press, NC)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat
- · Jig Bore, Jig Grinder

- Lathes (Conventional, NC, CNC, Turret)
- Layout (Conventional, CMM)
- Mills (Conventional, NC, CNC, Profile)
- Tool Grind
- Trade Related Bench Work

Metal Structures Technician

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 17208 Metal Structures Technician

Potential Auburn

In a product cell, utilizing predetermined setups and operating methods, adjust and simultaneously operate a variety of numerically controlled and/or conventional equipment capable of performing various functions such as, but not limited to, forming, bonding, welding, machining, drilling, cutting, robotic and otherwise automated and/or manual assembly.

□lp	olan t	to qualify through Vocational Training. All courses must be completed before applying.
		Basic Blueprint Reading or Machine Blueprint Reading
		Basic Precision Measuring Tools
		All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non-Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- Assembly
- Boring Mills (Vertical, Horizontal)
- Computer Numerical Control
- Drills (Radial, Press, NC)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat

- Jig Bore, Jig Grinder
- · Lathes (Conventional, NC, CNC, Turret)
- Layout (Conventional, CMM)
- Mills (Conventional, NC, CNC, Profile)
- Tool Grind
- Trade Related Bench Work

Model Maker

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 03609 Model Maker B

Potential Locations: Seattle

Model Makers machine, fabricate, and assemble close tolerance, high quality aircraft models and components for testing in wind tunnels. Models are constructed of metals, plastics, and composite materials. The Model Maker apprentice, in addition to conventional and NC machine operation training, also includes the use of precision measuring tools, plaster and plastic tooling, layout, elementary electronics, numerical machine programming, model construction, assembly, testing and wind tunnel maintenance.

⊒ I plan to q	qualify through Vocational Training. All courses must be completed before applying.
☐ Ba	asic Blueprint Reading or Machine Blueprint Reading
☐ Ba	asic Precision Measuring Tools
☐ Mi	illing Machine (a course minimum of 80 hours, or 5 or more credits)
☐ La	athe (a course minimum of 80 hours, or 5 or more credits)
	See page 16 for examples of approved conventional milling machine and lathe courses.
St a	Il applicants must complete an assessment or course within the last 5 years at their local Washington cate community or technical college. The applicant must have minimum placement results or course completion of follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of opplication, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non-Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- Boring Mills (Vertical, Horizontal)
- EDM Operator (Wire Feed, Non-Wire Feed)
- Electrical (Elementary)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat
- Inspection, Machine/Detail Fabrication
- Jig Bore, Jig Grinder
- Lathes (Conventional, NC, CNC, Turret)

- Machine Layout
- Mills (Conventional, NC, CNC, Profile)
- Model Construction (Finish, Install, Test)
- · Part Railing, Saws
- Remote Terminal
- Trade Related Bench Work
- · Wind Tunnel Maintenance
- Woodworking

NC Skin Mill Operator

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 17709 NC Skin Mill Operator Potential Locations: Auburn and Frederickson

NC Skin Mill Operators machine close tolerance, high quality spars for aircraft assembly. A graduate NC Skin Mill Operator will have the knowledge of all facets of skin and spar fabrication. An NC Skin Mill Operator apprentice receives training in all phases of conventional and NC/CNC milling machines, including skin and spar mills and layout, shot peen operations, hand work, heat treat, tank lines, assembly, prep, and spar handling processes.

lρ	lan to qualify through Vocational Training. All courses must be completed before applying.
	☐ Basic Blueprint Reading or Machine Blueprint Reading
	☐ Basic Precision Measuring Tools
	■ Milling Machine (a course minimum of 80 hours, or 5 or more credits)
	□ Lathe (a course minimum of 80 hours, or 5 or more credits) See page 16 for examples of approved conventional milling machine and lathe courses.
	□ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non-Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- · Assembly & Prep
- · Checking Fixture
- Crane Operator
- · De-Burr Machine Operator
- Drill Router (NC, CNC)
- Forming, Straightening
- Hand Drill Operator
- Hand Sand (Spar, Skin)

- Heat Treat
- Layout
- · Material Store
- Mills (Conventional, NC, CNC, Profile)
- Mills (Spar, Skin, Pull-Through)
- Shot Peen Operator
- Tank Line
- · Tool and Cutter Grinder

NC Spar Mill Operator

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 17908 Spar Mill Operator A NC Potential Locations: Auburn and Frederickson

NC Spar Mill Operators machine close tolerance, high quality spars for aircraft assembly. A graduate NC Spar Mill Operator will have the knowledge of all facets of spar fabrication. An NC Spar Mill Operator apprentice receives training in all phases of conventional and NC/CNC milling machines, including skin and spar mills and layout, shot peen operations, hand work, heat treat, tank lines, assembly, prep, and spar handling processes.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying.

•	
	Basic Blueprint Reading or Machine Blueprint Reading
	Basic Precision Measuring Tools
	Milling Machine (a course minimum of 80 hours, or 5 or more credits)
	Lathe (a course minimum of 80 hours, or 5 or more credits)
	See page 16 for examples of approved conventional milling machine and lathe courses.
	All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
Boeing e completion	score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all nor ducational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all cours ns and test challenges must be provided upon request and completed prior to applying. Any course of equivaler an acceptable substitute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- Assembly & Prep
- Checking Fixture
- Crane Operator
- De-Burr Machine Operator
- Drill Router (NC, CNC)
- Forming, Straightening
- · Hand Drill Operator
- Hand Sand (Spar, Skin)

- Heat Treat
- Layout
- · Material Store
- Mills (Conventional, NC, CNC, Profile)
- Mills (Spar, Skin, Pull-Through)
- Shot Peen Operator
- · Tank Line
- Tool and Cutter Grinder

Tool and Cutter Grinder

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 40708 Tool Grinder A

Potential Locations: Auburn

Tool & Cutter Grinders set up and operate a variety of conventional and CNC machines to modify, fabricate, and re- sharpen precision, high quality machine cutting tools to tight tolerance specifications. Tool & Cutter Grinder apprentices receive training in all aspects of the Tool and Cutter Grind trade, including a wide variety of drill/reamer grinding, high speed cutting tools, and carbide cutting tools utilizing conventional universal tool and cutter grind equipment, and CNC tool and cutter grind machines. Tool and Cutter Grind apprentices also receive training on our new state of the art CemeCon tool coating process, as well as learn most aspects of the Cutting Tool business.

☐ I plan to qualify through Vocational Training. All courses must be completed before applying

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☐ Basic Blueprint Reading or Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Milling Machine (a course minimum of 80 hours, or 5 or more credits)
☐ Lathe (a course minimum of 80 hours, or 5 or more credits) See page 16 for examples of approved conventional milling machine and lathe courses.
☐ All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.
A passing score of at least 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non Boeing educational transcripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course completions and test challenges must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results as noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience

Work Experience Examples:

- Boring Mills (Vertical, Horizontal)
- Computer Numerical Control
- Drills (Radial, Press, NC)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat
- · Jig Bore, Jig Grinder

must be available upon request.

- Lathes (Conventional, NC, CNC, Turret)
- Layout (Conventional, CMM)
- Mills (Conventional, NC, CNC, Profile)
- Tool Grind
- · Trade Related Bench Work

Tool and Die Maker

Term: 10,000 hours, 5 years (9,200 on-the-job hours and 800 school hours)

Target Jobs: 76010 Tool and Die/Deep Draw

Potential Locations: Auburn

Tool and Die Makers machine, plan, layout, fabricate, make, assemble, maintain and repair tools, dies, and molds. Tools and/or dies are constructed of metals, plastics and composite materials. The Tool and Die Maker apprentice, in addition to conventional and NC machine operation training, also includes the use of precision measuring tools, involving coordinated tolerances in more than one working plane and/or involving obtuse, acute or right angle construction; with dies such as push-through, blanking, piercing, cut-off, forming, joggle, deep, and compound dies, numerical machine programming. Assembly of tools and/or dies may include the creation and repair of pneumatics, hydraulic plumbing, and performing functional checks, testing and wind tunnel maintenance.

☐ I plan to qualify through V	ocational Training. All courses must be completed before applying.
Basic Blueprint Rea	ding or Machine Blueprint Reading
Basic Precision Mea	suring Tools
Milling Machine (a)	course minimum of 80 hours, or 5 or more credits)
`	nimum of 80 hours, or 5 or more credits) or examples of approved conventional milling machine and lathe courses.
State community of completion as follows:	t complete an assessment or course within the last 5 years at their local Washington r technical college. The applicant must have minimum placement results or course ows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the out no later than 14 days following a request for document verification.
Boeing educational transcripts	% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non- . Boeing employees can challenge most courses at an ERT Lab. Documentation for all course es must be provided upon request and completed prior to applying. Any course of equivalent tute to the noted courses.

□ I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results as noted above. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

Work Experience Examples:

- Boring Mills (Vertical, Horizontal)
- EDM Operator (Wire Feed, Non-Wire Feed)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat
- Inspection, Machine/Detail Fabrication
- · Jig Bore, Jig Grinder

- · Lathes (Conventional, NC, CNC, Turret)
- Machine Layout
- Mills (Conventional, NC, CNC, Profile)
- Saws
- · Trade Related Bench Work

Tooling Inspector

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 54808 Tooling Inspector B

Potential Locations: Everett, Renton, Seattle and Auburn

Tooling Inspectors verify tools and tool components to applicable drawings, specifications, and model based definition. Inspectors will have a working knowledge of tool assembly techniques, welding specifications, production processes, and measurement technologies. Tooling Inspectors use various measurement metrologies and techniques to verify and document tooling processes and tools.

I plan to qualify three	bugh Vocational Training. All courses must be completed before applying.
Basic Bluepr	int Reading or Machine Blueprint Reading
Basic Precisi	on Measuring Tools
Introduction t	o Composites
State comm completion	ts must complete an assessment or course within the last 5 years at their local Washington unity or technical college. The applicant must have minimum placement results or course as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the cation, but no later than 14 days following a request for document verification.
Boeing educational tran	east 80% is required for all Boeing classes or challenge tests, and a grade of "C" or better for all non- ascripts. Boeing employees can challenge most courses at an ERT Lab. Documentation for all course hallenges must be provided upon request and completed prior to applying. Any course of equivalent a substitute to the noted courses.
training requirements	ugh Vocational Training . An alternate method to meet the Tooling Inspector minimum vocational is to complete a certificate program that contains equivalent content to the acceptable Composite oted below <u>and</u> assessment placement or course results as noted above.
•	echnician Certificate (15 Credits); Edmonds Community College, Edmonds, WA: www.edmonds.edu/
☐ Manufacturing Composites Certificate (28 Credits); Washington Aerospace Research & Training (WATR) Center, Everett, WA: See https://watrcenter.edmonds.edu/	
•	omposite Technician Certificate (40 Credits); Everett Community College, Everett, WA: <u>vw.everettcc.edu</u>
	mposites Manufacturing Technician Certificate (31 Credits), Skagit Valley College, Mount Vernon, s://www.skagit.edu/
course results noted	bugh Work Experience. One year of trade related work experience and assessment placement or above. Examples of some trade related work experience are listed below. The one-year minimum composed of a combination of trade related work experiences. A resume listing your work experience

Work Experience Examples:

- Blue Streak/Bench Mechanic
- Composites
- Computer Numerical Control Programming
- Inspection (Machine detail; Fabrication)
- · Jig Bore, Jig Grinder

must be available upon request.

- Layout & Lofting (Sheet Metal, Non-metallic)
- Manufacturing Engineering
- · Tool & Die
- · Tooling, Tool Maker; Tool Inspector
- Trade Related Bench Work

Suggested Milling Machine, Lathe, and CNC Courses

The colleges listed below offer conventional milling machine, conventional lathe, and CNC machining courses. A minimum of 80 hours, of instruction, is suggested for each required course. Please verify all course information prior to enrolling. Current and eligible former Boeing employees can apply for tuition assistance for eligible classes and certificates through the IAM/Boeing Joint Programs Education Assistance Program. Current Boeing employees can also apply for Boeing tuition assistance for eligible classes and certificates through the Learning Together Program (LTP) via Worklife.

Qualifying Vocational Training Courses - A Suggested Guide.

Clover Park Technical College

4500 Steilacoom Blvd. SW, Lakewood, WA 98499, http://www.cptc.edu 253-589-5800

Apprenticeship conventional lathe and milling machine requirement: MCH 115 Standard Operating Procedures: Lathes & Mills (8 Credits) and MCH 135 Tool & Cutter Grinding (4 Credits) – both courses required; Apprenticeship CNC Machining requirement: MCH 204 Introduction to CNC (8 Credits); https://www.cptc.edu/programs/manufacturing
Nathan Baker, 253-571-8410, Nathan Baker@cptc.edu

Everett Community College

2000 Tower St, Everett, WA 98201, https://www.everettcc.edu 425-388-9100

Apprenticeship conventional lathe and milling machine requirement: MFG T 104 Machine Operator 1 (20 Credits) and MFG T 105 Machine Operator 2 (20 Credits) – both courses required. Contact faculty for CNC Machining options.

Darin Chase, 425-388-9390, dchase@everettcc.edu

Green River College

12401 SE 320th Street, Auburn, WA 98092-3622, http://www.greenriver.edu 253-833-9111
Apprenticeship conventional lathe and milling machine requirement: MFG 101 Intro to Machining and Manufacturing (13 Credits). Apprenticeship CNC Machining requirement: MFG 103 Conventional and Computer Numerical Control (CNC)

Machine Level 1 (80 Hours/6 Credits).

Tom Tagliente, 253-833-9111 ext. 4261, ttagliente@greenriver.edu

Lake Washington Institute of Technology

11605 132nd Avenue NE, Kirkland, WA 98034-8506, http://www.lwtc.ctc.edu 425-739-8100

Apprenticeship conventional lathe and milling machine requirement: MACH 105 Intro. to Manual Machining (4 Credits) and MACH 111 Intro. to Measuring Applications (3 Credits). Contact faculty for CNC requirement options.

Josh Meramore, 425-739-8357, Josh.Meramore@lwtech.edu /Steven Weaver, 425-739-8365, steven.weaver@lwtech.edu

Renton Technical College

3000 NE Fourth Street, Renton, WA 98056-4195, http://www.rtc.edu 425-235-2352
MTECS 180 (80 Hours/5 Credits) Machining Lathe; MTECS 182 (80 Hours/5 Credits) Machining Milling; and
MTECS 178 CNC Setup & Operation (80 Hours/5 Credits). Batholomew Kimani, 425-235-2335, bkimani@rtc.edu
David Schoenmakers, 425-235-2352, dschoenmakers@rtc.edu or Steve Buck, 206-399-8386, sbuck@rtc.edu
Note: RTC often provides a Saturday-only class ideal for 2nd shift employees.

Shoreline Community College

16101 Greenwood Ave N, Shoreline, WA 98133-5696, http://www.shoreline.edu 206-546-4101 Apprenticeship conventional lathe and milling machine requirement: MFGT105 (20 Credits) Manufacturing Technology: Conventional Milling Machines & Lathes; Contact faculty for CNC Machining options.

Keith Smith, 206-546-6969, ksmith2@shoreline.edu



IAM/Boeing :: Joint Programs Apprenticeship Program - Puget Sound



—Current (and eligible former) Boeing Employees—

Options to Complete Apprenticeship Vocational Requirements

An IAM/Boeing Joint Programs Career Advisor can help you determine which Apprenticeship Vocational Requirements can be satisfied through the Boeing ERT course completion or ERT challenge test process.

- Complete Boeing ERT Courses: Obtain ERT self-paced course materials from ERT Labs and use My Learning to enroll in instructor-led or Web-based ERT courses. All ERT self-paced courses require a final test administered at an ERT Lab for course completion credit.
- Complete Boeing ERT Challenge Tests: Current Boeing employees already possessing knowledge and skills for required apprenticeship vocational training requirements can take a challenge test for some of these requirements at an ERT lab. For ERT lab and course information see (http://lloc.web.boeing.com/sites/mqs/index.html?id=coursesuppert) Call an ERT Lab ahead of time to confirm availability and allow up to 3 hours for testing. Passing a challenge test is considered the equivalent of taking and passing the course.
- Complete Non-Boeing Courses and/or Certificates/Degrees: Generally, required apprenticeship courses and certificates/degrees offered through area colleges can satisfy apprenticeship application requirements. Consult the Apprenticeship Prep Pack for certificate/degree and college examples. Before enrolling in courses, consider speaking with a college instructor and/or advisor to help ensure you will learn the needed knowledge and skills. Current and eligible former Boeing employees can apply for tuition assistance for eligible classes and certificates through the IAM/Boeing Joint Programs Education Assistance Program. See http://iamboeing.com/index.aspx?com=1&id=7 (internal website) or http://www.iam-boeing.com/ (external website) for tuition assistance and eligibility information. Current Boeing employees can also apply for Boeing tuition assistance for eligible classes and certificates through the Learning Together Program (LTP) via Worklife. Funding approval is required prior to the course/certificate start date.

— Non-Boeing Employees —

Options to Complete (and Learn More About) Apprenticeship Vocational Requirements

• For non-Boeing applicants, required apprenticeship vocational requirements may be taken (or challenged) at many area colleges (consult this Prep Pack for certificate/degree and college examples). A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges tests, course, and degree completions must be provided upon request.

—Who Can Apply, How and When—

All Boeing and non-Boeing candidates may apply for open positions posted through the Boeing Global Staffing on-line requisition system at (https://jobs.boeing.com/) during advertised application acceptance periods. Regularly monitor the Boeing Careers and IAM/Boeing Joint Apprenticeship websites for new apprenticeship opportunities. A tip sheet and other documents to assist candidates with the application process are available at:

https://iamboeing.web.boeing.com/index.aspx?com=5&id=10.

—Contact Information –

IAM/Boeing Joint Apprenticeship

Office: PO Box 3707, MC 5M-202, Seattle WA 98124-2207

Internal web: http://iamboeing.web.boeing.com/index.aspx?com=5&id=1

External web: http://www.iam-boeing-apprenticeship.com

IAM District 751

Office: 9125 15th Place South, Seattle, WA 98108

Web: http://www.iam751.org Hours: M-F 8:00 AM to 5:00 PM

Office: 206-763-1300 or 1-800-763-1301

Auburn Hall: 201 A Street SW, Auburn, WA 98001. 253-833-5590 Renton Hall: 233 Burnett Avenue N, Renton, WA 98057. 425-235-3777 Seattle Hall: 9125 15th Place S, Seattle, WA 98108. 206-764-0324 Everett Hall: 8729 Airport Road, Everett, WA 98204. 425-355-8821



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Prep Pack