Each student is **required** to furnish all of the hand tools as listed below. Employers expect mechanics to own their own tools; the list below gets you started, and covers what you should need while engaged in our lab assignments. Special tools and equipment not listed here will be loaned to students by North Idaho College as needed. *Personal Protective Equipment (PPE) is a priority for student safety. **NOTE:** You don’t need these the first day, in fact, we host a ‘tool day’ during the first week of the semester with vendors who offer significant student discounts. Estimated cost for all tools: $700 to $1,650, depending on preference. Tool use is a syllabus requirement of the course AERM 104, *Shop Practices.*

### REQUIRED “GENERAL” TOOLS
(100-level courses)
- Combination Wrench Set, 3/8" - 7/8"
- Center Punch
- Pliers, Side Cutting
- Pliers, Duckbill
- Small Safety Wire Pliers (Left or Right handed)
- Hammer, Machinist, 12 oz.
- Combination Square
- Screwdriver Set, Slot 1", 4", and 8"
- Screwdriver Set, Phillips, #1-4", #2-1", and #2-6'
- Hacksaw with 3 blades 24 Pitch and 3 blades 32 Pitch
- File -8" Mill (Single Cut) with handle
- Putty Knife
- Eye Protection (clear) *
- Flashlight (L.E.D., headlamp suggested)
- Inspection Mirror
- Earmuff-style Hearing Protection *
- Digital Multimeter, auto ranging, *(Fluke 117 recommended)*

**RECOMMENDED – (100-level)**
- Tool box with wheels, large enough for all items listed (and then some)

### REQUIRED “AIRFRAME” TOOLS
(200-level courses)
- 25’ Tape Measure
- Pin Punch, 3/32"
- Pin Punch, 1/8"
- Socket Set, 3/8" drive, 1/4" - 3/4"
- Ratchet, 3/8" drive
- Extensions, 3/8" drive, 3" and 6"
- Speed Handle, 3/8" drive
- Universal, 3/8" drive
- Socket Set, 1/4" drive 3/16" - 1/2"
- Ratchet, 1/4" drive
- Extensions, 3" And 6"
- Cold Chisel, 3/4"
- Mallet, Plastic or Rawhide
- Gauge, Feeler .015 to .025
- Files, *with handle*
  - 8" Half Round, Double Cut, Bastard
  - 6" Round, Double Cut, Bastard
  - 10" Round Double Cut Bastard
- A set of needle files
- Pencil compass
- Tire valve stem removal tool
- Ignition Wrench Set, 5/32" - 7/16"
- Adjustable Wrench, (12")
- Allen Wrenches (Individual)
- Aviation Sheet metal Snips (Straight, Right and Left)
- * Respirator, Disposable-type, Organic Cartridge Pre-Filter (#7500-10) and Cap (#7500-27) *

**NOTES:**
- Required books will be provided
- **PPE** will be provided

Without PPE you can be prohibited from lab. That’s a bad thing.