

Structures Tool List



Below is the recommend list of tools needed as a Structures Specialist with Duncan Aviation. You are encouraged to purchase tools of good quality and should have your full inventory within 90 days of hire. Remember to utilize the **Duncan Aviation Tool Account Program** to help manage these upfront costs. As you further your career with Duncan Aviation, you may find it beneficial to purchase additional tools based on amount of use and convenience.

Most precision tools required by your job are provided by Duncan Aviation and are available from the tool crib or GSE. If you choose to purchase your own precision tools, please see our Cal-Lab recommendations on the last page. ***For quality and certification considerations, we expect the employee to purchase the best quality tools they can afford.*

New Hire Requirements (Within 90 Days)

Air Tools		Hammers	
	1/4" Palm Air Drill		Ball peen Hammer
	4x Rivet Gun & Basic Sets		Plastic/Rubber Tipped Hammer
	90 Degree Die Grinder		Dead Blow
	Air Nozzle		
	Air Vac	Screwdrivers	
	1/4" Drive Air Ratchet		Ratcheting Apex Screwdriver
	3" Mini DA Sander		Darwin Ratcheting Driver set (13981) Close quarters offset ratcheting screwdriver. (Yard Store) Also good for Hi-Lok
Sockets, Ratchets, Wrenches		Miscellaneous Tools	
	1/4" Sockets Shallow 3/16" - 9/16" 12 Pt.		Micro stop
	1/4" Drive Extension Set		Flashlight (2C Maglight or Equivalent) – AA works well
	1/4" Ratchet		Inspection Mirrors (1" & 2")
	1/4" - 5/8" Combination Wrenches		Punch/Chisel Set/Automatic Center Punch
	Speed Handle		Brass Punch Set
	Allen Wrench Sets (Standard & Metric)		Putty Knives (Different Sizes and Flexible)
	Ignition Wrench Set		Set of Files
			Pickup/Retrieval Magnet
			Mechanical Fingers
Pliers			Scribe/Awl/Hook Scribe
	Cleco Pliers		Pick Set - Quality
	10" Knipex Pliers (smooth jaw)		Clecos 50 each minimum 3/32, 1/8, 5/32, & 3/16
	Side Cutters		Drop Light – 13 Watt or LED with Long Cord
	Duck Bills		Drill Bit Index (Nominal Wire Size #60- #1)
	Needle Nose Pliers		Speed Handle Deburring Tool (Dog Leg)
	Vise Grips (4")		Rivet Cutters
			Tool Tote Bag
Toolbox			3 Skin Wedges
	Rollaway Cabinet (No Top Boxes) Tool box size will be limited to a foot print of 1,800 square inches (for reference this is equivalent to a 60" X 30" toolbox such as the 2006 Snap-On model KRL 1001). Height restriction is such that the owner must be able to easily see over the highest point on the box while moving it.		

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Requirements (Within 1 Yr.)		Requirements (Within 3 Yrs.)	
	90° Air Drill		Long Needle Nose Pliers (Straight and 45°)
	Air Pencil Grinder		Good Assortment of Bucking Bars
	1/4" Sockets Deep 3/16"-9/16" 12 Pt.		Composite Scissors
	Straight Die Grinder		Vise Grip Clamps
	Basic Set Metric Wrenches/Sockets		Hi-lok Pliers
	Calipers (Dial or Digital)		Hi-lok Removal Sockets
	Magnifying Lens (10X)		Rotary File Set
	"C" Squeeze and Variety of Sets		Note: Within 3yrs. of service a Structures Technician will be expected to own sufficient tooling to be able complete jobs without having to borrow common structures tools with exception of special needs tooling such as: Cherry Max guns Pneumatic Squeezes Composite HeatCons Borescopes & etc. "Similar high dollar equipment Duncan Aviation will supply"
	Dimple Dies		
	Drill Cup & Threaded Bushing Kit		
	1/4" Drive Swivel Socket Set 1/4"- 9/16"		
	Quality Cordless Drill (12V)		

**** As a general rule, if you have to borrow a specific tool several times, you need to consider purchasing one of your own, and we expect the employee to purchase the best quality of tools they can afford. Start out with the basics and build your tool kit as you go.**

The Duncan Aviation Tool Control program requires all tools in your tool box to be shadowed and marked identifying them to you specifically. During your Orientation, you will be issued your unique Duncan Aviation employee code; this code will be used to identify your tools. Duncan Aviation will provide your first set of foam for your box and materials to mark/identify your tools.

Tool Box

You will need a good roll-around tool box. You do not need to go big, you can always upgrade as you get settled in your new career.

Cordless Drill or Screw Gun

When shopping for a cordless drill don't skimp here, look for a quality lithium battery powered model with an adjustable clutch, Dewalt, Makita and Milwaukee make a good drill. Favor the brushless models for longevity, and battery life. The newer 12 volt models usually serve well, while the 18-20 volt models are also desirable, but are heavier.

Bits

There is not much of need for a large assortment of 1/4" replaceable screwdriver tips. Duncan Aviation considers the tips "consumables" and will supply most of the bits needed due to the wide variety of aviation specific fasteners. Likewise with drill bits, aviation primarily uses number bits # 1 – 60. If you purchase a set of drill bits, Duncan Aviation will replace the bits when they are worn.

Remember, Duncan Aviation offers an Employee Tool Account, AAF-2300, allowing new employees to borrow up to \$1500.00, interest free, their first year to purchase personal tools. Many times, you can take advantage of Duncan Aviation's buying power or corporate discounts to purchase tools at a discount. Inquire about this benefit during your Orientation.

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Precision Tools

Make	Recommended Model(s)	Comments
Multimeter		
Fluke	114 - 117 Series	Models 114 through 117, features vary by model.
Torque Wrench - Digital		
Snap-On/CDI*	xxxxCA3 Series	Electronic Torque Wrench
	xxxxCASG Series	Electronic Torque Wrench
	xxxxTAA Series	Electronic Torque and Angle Wrench
Torque Wrench - Analog		
Snap-On/CDI*	xx1SM Series	in.lb, 1/4" hex bit drive, micro-adjustable screwdriver style
	xxxLDINxx or xxxLDFNxx Series	Single or Dual Scale Dial Indicating
	xxxxMRMH or xxxxMFRMHxx Series	Single or Dual Scale Micrometer Adjustable Click Style
* Calibration Lab employees are Snap-On factory trained to calibrate and repair Snap-On and CDI torque devices.		
Precision Instruments	MD1F35H	5-35 in.lb, 1/4" drive, screwdriver style
	D1F50H	0-50 in.lb, 1/4" drive, dial torque driver
	M1x200H	40-200 in.lb, 1/4" drive, click
	M2x200H	40-200 in.lb, 3/8" drive, click
	M2x100F	20-100 ft.lb, 3/8" drive, click
	M3x250F	50-250 ft.lb, 1/2" drive, click
Caliper		
Mitutoyo	505-742	6" dial caliper
	500-196-30	6" digital caliper
Starrett	No. 120	6" dial caliper
	No. EC799A-6/150	6" digital caliper
Micrometer		
Mitutoyo	103-135	1" micrometer, 0.0001" resolution - dial
	293-330	1" micrometer, 0.00005" digital (293 series)
Starrett	T436-1XRL-1	1" micrometer, 0.0001" resolution - dial
	796-1XRL-1	1" micrometer, 0.0005" resolution - digital